concentrations 1.25%, 2.5% and 5%. The fourth group was kept as control. The diseased cases were evaluated visually and by fungal culture weekly.

Results: Trichophyton verrucosum was identified as a causative agent of dermatophytosis in calves. Microsporum canis was identified as a causative agent of dermatophytosis in cats. All treated groups recovered either after 2 treatments as in 5% concentration or 3 treatments with 2.5% and 4 treatments in 1.25% with 1 week interval between each treatment. control group remains infected even after 6 weeks.

Conclusion: Bergamot oil ointments with different concentrations give good results on clinical cases of dermatophytosis either due to Microsporum or Trichophyton infection with some differences in the duration of recovery. Higher concentrations gave rapid recovery with disappearance of scales and erythema with rapid appearance of hair and return to normal skin than lower one.

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Room: Hall 3 (Posters & Exhibition)

Virulence determinants and antifungal susceptibility pattern of yeast flora from droppings of Gallus gallus domesticus

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Background: Poultry (*Gallus gallus domesticus*) meat is widely consumed globally. Knowledge on the virulence and drug resistance among yeast microbiota of *G domesticus* droppings is lacking. This work was dedicated towards exploring these issues.

Methods & Materials: A total of n=103 specimens of fresh bird droppings of broilers and chickens were collected from breeding site. Eighty eight yeast isolates were identified by conventional methods including morphological, physiological, biochemical and Vitek based identification. Virulence factors like biofilm formation, cell surface hydrophobicity (CSH), superoxide dismutase, protease, lipase, phospholipase, DNAse and hemolysin were studied. Antifungal sensitivity testing was performed using broth microdilution (CLSI, M27-A3/ S4) for planktonic cells and XTT (2, 3Bis-(2-Methoxy-4-Nitro-5-Sulfophenyl)-2H-Tetrazolium-5-Carboxanilide) reduction assay for their biofilm counterpart.

Results: The isolates comprised of *Candida famata (*29;33%), *C. ciferrii* (12;13.6%), *C. albicans* (10;11.4%), *C. catenulata* (8;9.1%), *C. tropicalis* (6;6.8%), *C. krusei* (3;3.4%), *C. pintolopesii* (2;2.3%), and *C. parapsilosis* (1;1.1%), *Trichosporon spp. (9;10.2%), Geotrichum candidum (4;4.5%), Cryptococcus macerans (3;3.4%) and Rhodotorula minuta* (1;1%). Wide variation in the distribution of virulence factors was observed amongst different species. No major statistically significant relationship was found among the virulence factors of yeast isolates, as there were very low Pearson correlation coefficients (P value >0.05). The only observable relationship was found between the Pz values of Phospholipase and DNAse (P= 0.038) and between the Pz value of lipase and percentage of CSH (P= 0.040). Biofilm cells showed higher MICs (μg/ml) than planktonic cells against all antifungals tested: amphotericin B, 0.5-64 vs 0.031- 16; caspofungin, 0.062-4 vs 0.031-1; fluconazole, 8-512 vs 0.031-16; voriconazole 0.062- 16 vs 0.062- 8.

Conclusion: Detection of drug resistance and wide range of virulence factors amongst *Gallus gallus domesticus* intestinal yeast flora is of great concern because these flocks may be potential reservoirs for transmission of drug resistant yeasts to humans. In addition, possible horizontal transfer of virulent genes among poultry and human pathogens may pose a grave risk to human health.

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Disseminated phaeohyphomycosis presenting as chromoblastomycosis in an immunocompetent host: A rare manifestation

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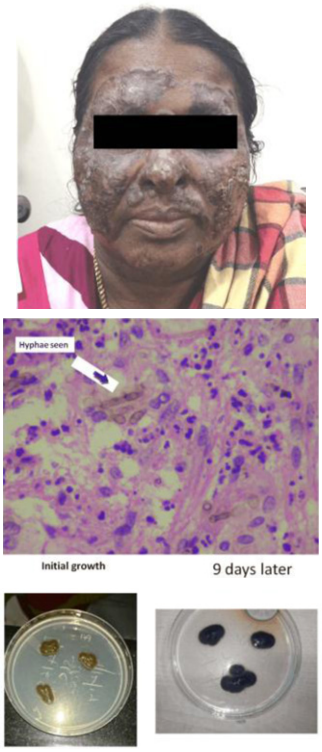
Background: Phaeohyphomycosis is a rare, deep fungal infection of the skin and subcutaneous tissues caused by dematiaceous fungi. Exophiala spinifera, one of the dematiaceous fungi causes local and disseminated phaeohyphomycosis. It usually occurs in persons with decreased host immunity, although few cases have been reported in apparently immunocompetent patients. We report a case of disseminated phaeohyphomycosis caused by E.spinifera in a 52-year-old woman without evidence of immunodeficiency presenting with clinical features of chromoblastomycosis.

Methods & Materials: A 52-year-old female from Tirunelvelli, Tamil Nadu with no co-morbidities presented with multiple verrucous, well-defined plaques encompassing lesions of varying sizes on her face (Fig. 1), back as well as subcutaneous swelling on right hand, both legs of 5 years' duration. The lesion first manifested as non-itchy, small, erythematous papular lesion on the forehead gradually increasing in size. There was no history of apparent trauma. In last 3 months she had developed swelling in both legs associated with discharge. She was treated earlier with voriconazole with no response. There was no history of fever, cough with expectoration, loss of appetite or loss of weight. Systemic examination revealed no abnormality.



Results: Clinical diagnosis included disseminated chromoblastomycosis with chronic osteomyelitis. She underwent extensive debridement of lesions of both legs and tissue/pus sent for cultures. Biopsy revealed granulomatous infiltration composed of neutrophils and multinucleated giant cells. H&E and PAS staining showed pigmented septate hyphae proliferating in and around granulomas and budding yeast form of fungus (Fig. 2). Isolate was sent for definitive identification, susceptibility testing and molecular typing to the Center of Advance Research in Medical Mycology, PGI, Chandigarh. Incubation on Sabouraud's glucose agar medium yielded grey-black and yeast-like colonies in which the hyphae were morphologically expanding with the formation of annelloconidia (Fig.3), indicating that the isolate was an *Exophiala* species.. The patient was started on oral itraconazole and terbinafine. An improvement was observed 2 weeks after commencement of treatment, leading to gradual, but dramatic, resolution of the lesions.

Conclusion: This case highlights various manifestation of E spinifera presenting clinically as chromoblastomycosis & histopathologically as phaeohyphomycosis in an immunocompetent adult with excellent response to itraconazole and possibly lower sensitivity to voriconazole.

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Clinical diversity in central nervous system cryptococcosis

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Background: Though cryptococcal meningitis (CM) is recognized as a disease of the immunocompromised, studies have implicated that it also affect immunocompetent patients.

Methods & Materials: This was a cross sectional study conducted in the Department of Medicine ofa tertiary teaching institution in North India. All the patients diagnosed with cryptococcal meningitis on the basis of detection of cryptococcal antigen or the presence of capsulated budding yeast cells on India ink preparation,from April 2009 to March2015 were included in the study. Demographical profile, clinical presentation, predisposing factors, CSFcharacteristics, imaging abnormalities and in patient outcome were noted and analyzed

Results: Among the 40 patients diagnosed with CM, 62.5% of them were males. Eight patients were immunocompetent, 10 had predisposing factors other than HIV and 22 had HIV infection (initial presentation in 59%). Mean age of presentation was 44.75 +/_ 15.78 years. Mean duration of symptoms in all three groups varied from 3-4 weeks.

Clinical presentations included fever (16), headache (14), altered sensorium (16), seizures (5), paraparesis (4), hemiparesis (2), lateral rectus palsy (3), VII nerve palsy (2), bilateral vision loss with ptosis (1) and ataxia (1). Neck stiffness was present in 50% patients of immunocompetent group, 45.45% of HIV patients and none in the 3rd group.

Acellular CSF (37.5%) was not unusual. Mean CSF white cell count in HIV patients, in other immunocompromised patients and immunocompetent patients were 159.09 +/_ 317.42, 36.88 +/_92.43 and 32.5 +/_62.05 /mm^3 respectively which was predominantly lymphocytic. Mean CSF protein were 136.73 +/_ 139.82, 62.67 +/_ 51.11 and 152.29 +/_ 218.24 g/dl in these groups. Abnormalities detected on imaging included, meningeal enhancement, encephalomalacia, infarct, cerebellitis, hydrocephalus, cord hyper intensitiesand cervical spine intramedullary lesion.

Mortality rate in crytpococcal meningitis patients was 20%. On mortality analysis, death was mostly attributed to the primary disease.

Conclusion: Clinical presentation of CM in both immunocompetent and immunocompromised patients was similar. Though previous studies noted less inflammation in immunocompromised patients, in this series HIV patients had a better inflammatory response in terms of CSF pleocytosis compared to other groups. Since the presentation of CM is variable, all cases of meningitis should be screened for the same.

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